



KENYATTA UNIVERSITY

SUPPLEMENTARY/SPECIAL EXAMINATIONS 2020/2021 EXAMINATION

FOR THE DEGREE OF BACHELOR OF SCIENCE

KST 104: FUNDAMENTALS OF CHEMISTRY

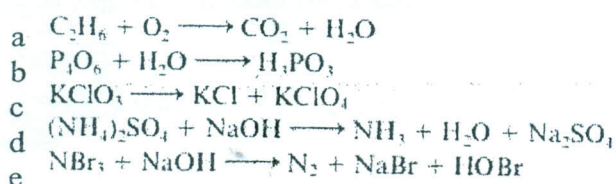
OCTOBER 2021

TIME: 2 HOURS

INSTRUCTIONS

SECTION A: 40 MARKS (Answer ALL Questions)

1. Balance the following equations. [5 marks]

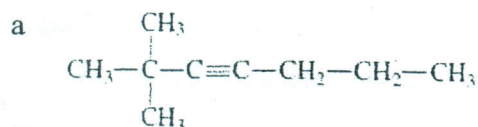


2. Use VSEPR theory to predict the geometric shapes of the following molecules and ions.

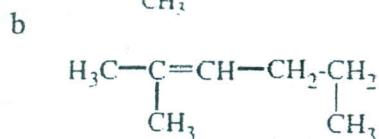
[6 marks]

- a) COF_2
b) SiF_4
c) SF_2

3. Give the IUPAC name of each of the following compounds:



[1 mark]



[1 mark]

- b) Draw a condensed structural formula for each of the following hydrocarbons.

[3 marks]

- a) 2-Methyl -2-heptanol
b) 3-Methyl-1-pentene
c) 1,6-Heptadiene

11. a) Using equations, discuss the various types of chemical reactions. [9 marks]
- b) determine the molarity of a NaOH solution when each of the following amount of acid neutralizes 25.0mL of the NaOH solution. [6 marks]
- a) 20.00mL of 0.500M H_2SO_4
- b) 23.76mL of 1.00M HCl